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Operations Management: the key to cost containment

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The multiplicity of indictments relating to the "health care crisis" have been publicized to the hilt and beyond. It would serve no purpose to rehash them here. Nor would it be useful to dwell on such factors as escalating labor, research, equipment and construction costs or frequent conflicts between the medical and administrative professionals.

However, out of all the dialogue and monologues emerge two hard unalterable facts. Whatever the underlying causes, health care costs continue to grow faster than almost any other item in our economy. Concurrently, pressures for less costly health care delivery continue to build from powerful consumer, labor, employer and government factions.

These facts lead the health care institution—supported largely by public funds—to the following management strategy: install an effective management process to control costs.

Is such a management process achievable? The evidence proves that it is. By introducing proven management tools, health care facility and delivery costs can be reduced, inflation or not, and the quality of service can be improved.

OPERATIONS MANAGEMENT: THE CONCEPT

Management tools long used to control costs range from budget analysis, rate restructuring and purchase deferment to study committees, revamped services and, in a highly labor-intensive industry, personnel reductions.

Other modern management tools and strategies are being employed such as work measurement, computerized processing and record keeping, satellite clinics, mergers and joint ventures, and regionalized health care delivery. In some cases, costs are being better controlled. More often, efforts employing these tools and strategies are fragmented and ineffective. Only infrequently has the integrated management approach—Operations Management—been applied to the problem of cost containment. Experience has shown that Operations Management can be a workable approach to cost containment.

What is Operations Management? It starts with the definition of the health care needs of individuals and the community being served. With health care needs as a springboard, meaningful health care delivery objectives are set. The target, of course, is quality health care delivery at minimum cost. Operations Management emphasizes the real environment in which change is to be effected. It does not attempt to propose cost containment approaches beyond the capacity or capabilities of those persons responsible for implementing them.

At the hub of Operations Management is the identification of operating service levels required for the specific functions within the hospital operation. Traditionally, service levels, while vaguely understood, are not explicitly defined. Service level definition is crucial if we are to establish concrete goals and monitor milestones in reaching them.

For example, let us assume that in analyzing and evaluating the patient admission function (which typically is characterized by delays and queues) we establish a service level of 30 minutes for the processing and admission of each patient. Once service level is defined, alternatives for achieving the service level—increasing the number of admission stations and clerks, modifying admission stations and clerks, modifying admission procedures and schedules, etc.—may be examined.

How is Operations Management practiced? After defining objectives, key management personnel establish a project group or analysis team to analyze related operations. The purpose is to improve, not to blame. The analysis would attempt to identify planning and scheduling weaknesses, work simplification opportunities, excessive service levels, excessive supervision, duplication of effort, procurement shortcomings, and areas where capacities and work leads are out of line.

The analysis team would attempt to perform a top-down identification of problems and opportunities and a bottom-up implementation of cost-control techniques.

OPERATIONS MANAGEMENT STEP BY STEP

Operations Management will be no more effective than the planning and thought that go into its development. What follows is a step-by-step rundown of the approach in action.

1. Analyze available documentation on organization structure, department problems and objectives, budgets and forecasts, methods and systems, plans for growth and innovation, and any current operations studies and resulting recommendations.
2. Interview key personnel to determine departmental functions, understand current operations, and obtain any suggestions for change.
3. Identify currently available manpower, financial, building, equipment, and other resources.
4. Define and evaluate the existing operating and organizational structure, job classifications, computer and manual systems, forms, records and procedures.
5. Define and quantify functional service levels.
6. Evaluate the application of resources in performing services and achieving objectives.
7. Evaluate existing short- and long-range plans.
8. Compare functions with similar functions in other institutions.
9. List in priority of importance the alternative opportunities for improvement.
10. Conceptualize alternative recommendations for improvement. Describe the operating approach and systems required to set up and control operations.
11. Evaluate alternative recommendations *before* soliciting managerial comments. Weigh carefully the impacts of the change to make certain its benefits are sufficiently impressive to compensate for natural resistance to change, cost of installation, the time and training investment. Make sure the change is salable and acceptable to labor and management.
12. Obtain approvals of key personnel. Where opposition exists, note arguments posed and reassess recommendations where necessary.
13. Develop with departmental personnel an implementation plan. Review the plan with department heads to make sure all problems are identified and resolved. Make further adjustments where required.
14. Meet with key managers to allocate people and dollar resources.
15. Prepare detailed implementation plans for applicable projects. Spell out assignments and manning, responsibilities, lines of authority, acceptable lapsed times, measurable end products.
16. Set up performance measurement and control guidelines for use during implementation on an ongoing basis.
17. Aid managers in the day-to-day activities required to resolve implementation problems and misunderstandings.

OPERATIONS MANAGEMENT IN ACTION: CASE HISTORIES

The Problem

The 200-bed Eastside Community Hospital in a growing town of 50,000 had been operating at an occupancy rate of 68 percent (now substantially improved). A 30-man crew maintained buildings, powerhouse, and grounds, and performed such functions as painting, carpentry, cleanup, and electrical repairs. Maintenance was generally satisfactory. But certain projects, such as floor renovation, were continually postponed because of manpower limitations. The maintenance supervisor flatly stated that for projects of this kind he would have to hire more people or subcontract the work.

Recommendations

Among many other findings, the Operations Management approach disclosed that the service-level requirements of the maintenance function had never been defined. Random demand for special and miscellaneous projects disrupted scheduling and control procedures. To eliminate this problem certain key steps were taken. The terms "demand call," "special project," and "emergency request" were defined. Communication lines were tightened between Maintenance and user departments. A preventive maintenance program was established.

Demand calls and special requests were channeled through a responsible supervisor. A manpower pool was established to perform emergency work promptly. A 72-hour time limit was established for other demand jobs where material was available. A project control system was established which defined estimated costs for all work requests, identified project supervisors, and established realistic start and completion dates.

The implemented system significantly reduced project over-runs, resulted in project completion on or near schedule, and produced substantial operating economies and productivity plans.

The Problem

First Community Hospital is a 400-bed operation that provides quality medical care to its patients. In addition, the hospital averages about 300 outpatients each day. The administration received many complaints that the service provided by the Medical Records Department (MRD) was not up to par. A number of requests had been made by all three shift supervisors for additional staff, but no action had been taken.

The MRD organization consisted of a director, 10 day, 6 evening, and 4 night shift personnel. Each shift has one supervisor. In addition, the day and evening shifts each have two transcribers. All other personnel are file clerks.

Recommendations

It was apparent that the MRD work load has not been balanced to relieve the backlog conditions during peak periods of activity. Some suggestions for improvement were as follows:

- Eliminate fixed assignments to file locations and establish a central pool of filing clerks.
- Establish a retrieval system whereby messenger clerks are assigned specific floor responsibility on a permanent basis for retrieval of medical records.
- Establish a dispatching system which allocates work in minimum batch sizes to reduce walking time and allow greater utilization of messenger clerks.
- Revise MRD work scheduling to accommodate user needs and keep the backlog of requests at a minimum.

Systematic retrieval and delivery methods for medical records can only be accomplished if individual responsibility is established and strict scheduling adhered to. The effort involved must be consistent with normal hospital and file demands.

The Problem

The Radiology Department of General Hospital was one of the largest hospital departments, both in terms of its budget and the amount of revenue generated. However, for five years, the department had been operating at a slight loss despite significant increases in the number of patients processed.

During the intial operations review the patient processing system was studied. It appeared that some of the technologists and rooms were underutilized despite the heavy patient load.

Furthermore, it was observed that most of the activities performed in the examination room by the technologists had to be performed sequentially. In fact, when a technologist was observed working alone the actual processing time increased by less than 10% compared to similar x-rays performed in a room staffed with two technologists.

It was estimated that four radiology technologists could be eliminated from the underutilized rooms, for a total annual saving of approximately $28,000. The chief radiologist disagreed with the potential for profit improvement, indicating that personnel could not be reduced so long as patient processing time continued to be excessive.

Recommendations

Based on the findings and problems identified during the detailed analysis, the following major activities were undertaken:

- Developed a patient scheduling and processing system to manage the assignment and completion of patient activities:

  Reduce patient wait time

  Reduce patient processing time

  Increase utilization of rooms and technicians

- Restructured other radiology personnel to load and transport film and assist patients into rooms.
- Rescheduled number of technicians in radiology rooms consistent with observed work volume.

THE ROADBLOCKS TO PROGRESS

Operations Management identifies desired service levels and in an orderly way develops alternatives for achieving these targets. This approach is straightforward enough. Confronted with the conceptual approach and step-by-step development, few institutional managers would dispute the soundness and logic. Yet historically, programs of this kind are difficult to sell on the widespread basis merited by their proven potential. The reason why so often Operations Management is not practiced might be the influence of managerial biases. Managerial biases include unjustified optimism, negative reaction to criticism, mental blocks toward the ideas of others, and holding personal self interest over institutional and community needs.

When managerial bias takes command, creative thinking is stymied, analyses are ineffectual, and recommendations are illogical.

We are all biased to a certain degree. The challenge confronting us is to overcome our prejudices. To do this we might practice what has been called "Adversary Appraisal." A strong and simple concept, Adversary Appraisal utilizes one's peers—managers, supervisors, department heads—to systematically review program proposals to pinpoint weaknesses and strengths.

The values are obvious. Adversary Appraisal ensures objectivity. It serves to cross-verify data underlying the proposal. It tests cost-savings estimates. It helps to realistically evaluate the scope and potential of innovative ideas based on available resources. Properly used, Adversary Appraisal becomes Team Appraisal.

In summary, it must be stressed that Operations Management is not a one-time undertaking. It is a *continuous* disciplined approach to the identification of problems and the development of solutions in a structured manner. As experience demonstrates, once established, Operations Management is self-perpetuating. Efficiency becomes the norm.

What Operations Management results in is effective cost containment on an ongoing basis.